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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,116	04/25/2005	Ferdinand Gundolf	MEISS88.001 APC	8836
20995 7590 03/27/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER SCHILLINGER, ANN M	
			ART UNIT	PAPER NUMBER
			3738	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		03/27/2007	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/27/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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ed

<b>Office Action Summary</b>	Application No. 10/511,116	Applicant(s) GUNDOLF, FERDINAND	
	Examiner Ann Schillinger	Art Unit 3738	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED, (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/25/05, 5/16/05</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

The disclosure is objected to because of the following informalities: page 6, paragraph 0033, line 1 states that Figure 2 shows element 25, but this element is not shown in Figure 2.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12, 13, 15, and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kraus (U.S. Pat. No. 4,195,367). Kraus et al. discloses the following of claim 12: an apparatus for promoting growth selected from the group consisting of bone growth, osteosynthesis of bone fragments, fixation of bone fractures, and osteosynthesis of bone fragments with fixation of bone fractures, said apparatus comprising: at least one implant (510); at least one piezoelectric element (517) associated with said implant, said piezoelectric element under the action of forces, generates electrical pulses which serve as a stimulant for bone growth (col. 1, lines 54-61), said at least one piezoelectric element forming an integral component of said at least one implant (see Figure 7); and at least one contact element (516, 524, 542, 528, 530) operative to come into contact only with surrounding bone (511) and said piezoelectric element (517), said at least one contact element being made from electrically conductive material tolerable to humans (col. 7,

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lines 6-25); and wherein said implant defining one pole and said contact element defining the other pole of said piezoelectric element (col. 8, lines 52-65); and said piezoelectric element being arranged within said implant or within an implant pocket open towards the bone (see Figure 7).

Kraus et al. discloses the following of claim 13: the apparatus of claim 12, wherein said piezoelectric element terminates substantially flush with the surface of said implant (see Figure 7).

Kraus et al. discloses the following of claim 15: the apparatus of claim 12, wherein said implant is selected from the group consisting of a pin-like holder for an artificial tooth, a bone or pedicle screw, a bone fixation pin, and a bone fixation element (510).

Kraus et al. discloses the following of claim 19: the apparatus of claim 12, wherein said piezoelectric element is made from a material selected from the group consisting of a piezoelectric ceramic, a zirconate ceramic and a titanate ceramic (col. 8, lines 59-62).

Kraus et al. discloses the following of claim 20: the apparatus of claim 12, wherein at least two of said piezoelectric elements are provided and have an electrical connection selected from the group consisting of series electrical connection, and parallel electrical connection (col. 5, lines 46-48; col. 7, lines 31-35).

Kraus et al. discloses the following of claim 21: the apparatus of claim 12, wherein said at least one implant is made of metallic material (col. 4, lines 52-55).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus in view of Valentini (U.S. Pat. No. 5,759,205). Kraus discloses the invention substantially as claimed, however, Kraus does not disclose piezoelectric elements located within the bottom opening of a hip-joint socket. Valentini teaches piezoelectric elements located within the bottom opening of a hip-joint socket in col. 8, lines 5-28 and Figure 2 for the purpose of enhancing the growth of bone around the implant to secure the implant in place. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place piezoelectric elements located within the bottom opening of a hip-joint socket in order to enhance the growth of bone around the implant to secure the implant in place.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus in view of Sawyer et al. (U.S. Pat. No. 4,027,392). Kraus discloses the invention substantially as claimed, however, Kraus does not disclose which parts of the apparatus serve as the positive and the negative poles. Sawyer et al. teaches the piezoelectric element generating a current intensity of 10-100 microamperes in col. 4, lines 4-15 because it has been found that a current within this range performs best in producing osseous and cartilaginous growth without any accompanying necrosis. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use piezoelectric element that generates a current intensity of 10-100 micro-amperes because it has been found that a current within this range performs best in producing osseous and cartilaginous growth without any accompanying necrosis.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus in view of Levy (U.S. Pat. No. 4,026,304). Kraus discloses the invention substantially as claimed, however, Kraus does not disclose the locations of the positive and the negative poles on the apparatus. Levy teaches that a negative pole would be at the implant and the positive pole would be at the contact element in col. 3, lines 51-60 because it has been found that tissue regeneration occurs at the negative pole while resorption occurs at the positive pole. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to locate a negative pole at the implant and a positive pole at the contact element in order to encourage greater tissue regeneration at the implant, to better secure the implant in place.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Schillinger whose telephone number is (571) 272-6652. The examiner can normally be reached on Mon. thru Fri. 9 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on (571) 272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ann Schillinger  
March 14, 2007

*A. Stewart*  
**ALVIN J. STEWART**  
**PRIMARY EXAMINER**